

NORTHERN VIRGINIA COMMUNITY HOSPITAL, LLC

SPECIAL EXCEPTION APPLICATION SPEX 2008-0028

STATEMENT OF JUSTIFICATION

SEPTEMBER 3, 2008

I. INTRODUCTION

Women's Hospital Indianapolis, L.P. ("HCA"), the owner of approximately 57.7 acres of land within Sections 100/102 of the planned community of Broadlands and the former Fallen Willow Farm property (collectively, the "Property"), along with an affiliated entity, Northern Virginia Community Hospital, L.L.C. ("NVCH") (collectively, the "Applicant"), request approval of a Special Exception application ("SPEX") to construct a general hospital of up to 164 beds and medical care facilities (outpatient only), all in the planned community of Broadlands (the "Broadlands Regional Medical Center" or "BRMC"). The BRMC will be located on an easily accessible site that is part of a regional business park planned for more than 2.5 million square feet of commercial development. This new hospital will consolidate the services offered at two older hospitals – Northern Virginia Community Hospital in Arlington County and Dominion Hospital in Falls Church – into a single, new facility in fast-growing Loudoun County.

Broadlands Regional Medical Center will be located contiguous to the critical east-west corridor of the Dulles Greenway and north-south connection of Belmont Ridge Road (Route 659). When completed, BRMC and the associated medical office building will generate approximately \$100 million in local taxes for Loudoun County during construction and its first 20 years in operation.

The proposed hospital and related facilities are consistent with the guidance and standards set forth in the Revised General Plan and the standards of the Revised 1993 Loudoun County Zoning Ordinance. Accordingly, the Applicant respectfully requests the support of the County Staff and Planning Commission and approval of the SPEX application by the Board of Supervisors.

II. HISTORY OF THE BROADLANDS PLANNED COMMUNITY

The planned community of Broadlands was created in the mid-1980s through a series of zoning approvals by Loudoun County, but was substantially redesigned in the mid-1990s with the adoption of ZMAP 1995-0003 and ZCPA 1995-0005. As part of the community redesign, Broadlands Associates, the developer, created a new Concept Plan and Proffers that established the location, intensity and mix of development throughout the approximately 1,500 acre site, as well as the public improvements and community features to be constructed as part of the phased development.

A. CONCEPT PLAN AND PROFFERS

The Concept Plan divided the Broadlands community into sections that included portions of the subject Property and established the type, mix and intensity of uses for each section, consistent with the accompanying Proffers. The Concept Plan and Proffers also established caps on the number of dwelling units that could be constructed in Broadlands and capped the percentage of commercial development permitted in Broadlands, including office uses, mixed use (office and retail) and neighborhood retail.

In 1997, Broadlands Associates filed applications with Loudoun County to amend the Concept Plan and Proffers (ZCPA 1997-0004), which the Board of Supervisors approved on January 20, 1999. The Concept Plan and Proffer amendments modified the location and obligations for various public improvements that were to be constructed as part of the Broadlands development, including parks and recreation facilities, a library, mental health facilities and fire and rescue facilities.

Both the Broadlands Concept Plan and the Revised General Plan designate Sections 100/102 of Broadlands for Office/Business uses. Thus, the Property is appropriately planned to permit development of commercial uses, including a hospital, outpatient medical care facilities and associated uses. Because, however, the portion of the Property covered by the Broadlands Concept Plan is proposed to be developed with parking and other, secondary uses associated with the proposed hospital and outpatient facilities, the Applicant also is requesting, in addition to the SPEX application, a Zoning Concept Plan Amendment ("ZCPA") to clarify that the Property and uses are to be developed under a unified plan of development with shared facilities and development standards.

B. ZONING PURSUANT TO REVISED 1993 ZONING ORDINANCE

Beyond the Concept Plan and Proffers, the Broadlands portion of the Property currently is zoned PD-H3, but administered as Planned Development-Office Park ("PD-OP") under the Revised 1993 Zoning Ordinance. The Fallen Willow Farm portion of the Property is zoned PD-OP under the Revised 1993 Zoning Ordinance. The Property, therefore, is split-zoned PD-H3/PD-OP and PD-OP under the Revised 1993 Zoning Ordinance.

Under the PD-OP district, hospitals and outpatient medical care facilities are permitted by Special Exception granted by the Board of Supervisors. Therefore, although the hospital and outpatient facilities are not located specifically on the portion of the Property governed by the Broadlands Concept Plan, they are permitted via Special Exception as associated and accessory uses on the adjacent PD-OP property under a unified plan of development, as they would be were the Property not subject to two zoning ordinances.

III. INCORPORATION OF FALLEN WILLOW FARM PROPERTY INTO BROADLANDS COMMERCIAL LAND BAYS

In the late 1990s, Broadlands Associates purchased several outparcels of land along Route 659 south of the Dulles Greenway and adjacent to the Broadlands commercial land bays of Sections 100, 102 and 104 (the "Fallen Willow Farm property") and secured a rezoning from Loudoun County to permit development of office uses under the PD-OP standards and

incorporate the Fallen Willow Farm property into the Broadlands community. With the approval of ZMAP 1999-0009, development of the Fallen Willow Farm property was coordinated with (but not tied to) the development of the balance of the Broadlands commercial land bays (Sections 100, 102, 104, 106 and 108), albeit with a separate and independent set of Proffers, and a Conceptual Development Plan ("CDP") showing access points, building setbacks and future rights-of-way for road improvements for the Fallen Willow Farm property.

Hospitals and outpatient medical care facilities are permitted by Special Exception in the PD-OP zoning district, supplemented by Section 5-610 of the Revised 1993 Ordinance, at an FAR of up to .40. Thus, the Property is zoned to permit development of a hospital and associated uses upon approval of a Special Exception application by the Board of Supervisors. Medical office buildings are considered a "by-right" use under the PD-OP district regulations.

To clarify the permitted uses on the Fallen Willow Farm portion of the Property and ensure the Property develops under a unified plan of development, the Applicant is pursuing a ZCPA application to amend the CDP for the Fallen Willow Farm property. The ZCPA would confirm the establishment of a hospital and outpatient medical care facilities on the Fallen Willow Farm property subject to a unified plan of development, and permit development of the Fallen Willow Farm property to exceed 0.40 FAR, provided the Property's overall development did not exceed 0.40 FAR.

IV. PROPOSED BROADLANDS REGIONAL MEDICAL CENTER

On March 10, 2004, and again in May 2005, Virginia's State Health Commissioner approved a Certificate of Public Need ("COPN") for the construction of the BRMC, including 164 hospital beds, subject to certain conditions, on the Property. The COPN approved by the Health Commissioner specifically approves the Broadlands location and the services proposed by the Applicant.

Pursuant to this COPN, the Applicant proposes to construct, in phases, an approximately 392,000-square-foot general hospital on the Property, along with up to two (2) outpatient medical care facilities of up to a total 400,000 square feet. The Applicant reserves the right to construct fewer than 400,000 square feet of outpatient medical care facilities, and to construct medical office and other permitted uses in lieu of outpatient medical care facilities, consistent with the applicable concept plans.

Subject to approval of the requested zoning applications, the hospital is expected to open for service in the first quarter of 2011. The Applicant is requesting SPEX approval for up to 164 beds. No additional beds will be constructed above the 164 beds authorized by the COPN without the approval of State Health Commissioner or amendment to this SPEX.

BRMC will be a modern medical facility with a lower level, an entryway plaza level, and up to five (5) stories above the plaza level, for a total of seven (7) levels. The hospital likely would be built in phases. One by right (1) medical office building is planned as part of the initial phase, with the potential to construct a second medical office building (along with a second parking structure) in the future. These two (2) office buildings are expected to contain approximately 200,000 square feet each. As part of the companion special exception application,

the Applicant proposes to include up to 400,000 square feet of outpatient medical care facilities within the square footage of the hospital and/or the by-right medical office buildings.

A backup power generation facility, powered by diesel fuel, also is included with the SPEX application. This use is accessory to the primary medical uses and permitted by Special Exception under both zoning ordinances.

A. HOSPITAL SERVICES, CHARITY CARE AND PARTNERSHIP WITH LOUDOUN COMMUNITY

Within the hospital itself, BRMC is planned to have a mix of medical/surgical beds, ICU beds, obstetric/pediatric beds, mental health beds and other critical services. The medical/surgical beds will be entirely private rooms. The planned mental health services include inpatient child and adolescent psychiatric services, outpatient psychiatric consultation, and partial/day hospitalization. The child and adolescent patient rooms will all be semi-private.

The array of services to be offered at BRMC expand upon the basic services currently offered by Inova Loudoun Hospital Center that are so overburdened by the area's population growth (ICU, telemetry, medical and surgical beds, surgery and emergency services, labor and delivery services, etc.). In the future, BRMC will be responsive to the changing needs of the population and grow with the community over time.

1. EMERGENCY SERVICES AND DISASTER RESPONSE

The Emergency Department will include equipment and experienced staff specifically designed for pediatric emergencies and vehicle accident patients. BRMC also will employ emergency personnel specifically trained and retained to serve the needs of pediatric emergency patients. In addition, due to its location along the heavily traveled western arteries, BRMC will focus on equipping its Emergency Department with the appropriate staff and equipment to handle vehicle accidents.

In recognition of its proximity to Dulles Airport, and with heightened concerns about disaster response, bio-terrorism or similar threats caused by weapons of mass destruction, the Emergency Department at BRMC will be equipped with advanced decontamination and personal protective equipment for first responders. One floor of the BRMC will be equipped to permit isolation of affected patients as necessary and warranted. This hospital will participate with the Northern Virginia Emergency Coalition Group in ensuring a community-wide disaster response. As a central emergency resource for the main international airport of the nation's capital, it is essential that BRMC have adequate capacity to support security and safety at Dulles.

2. CHARITY CARE

The BRMC will have a policy to provide medical services to those who cannot afford them, just as its sister facility, Reston Hospital Center, already does. For example, for those persons with annual incomes of up to 200 percent of the federal poverty level who lack third party insurance or coverage, the BRMC will fully discount the patient's medical charges. Similarly, BRMC will charge a sliding scale to patients with annual incomes between 200 and

400 percent of poverty and who lack third party insurance or coverage. This charity care policy is the most generous for hospitals in Northern Virginia.

BRMC also will accept Medicare and Medicaid patients and participate in Unicare, Virginia's Medicaid HMO product. In addition to Medicare and Medicaid patients, BRMC will accept patients from approximately 15-20 different private insurance plans.

B. POPULATION GROWTH AND THE NEED FOR A HOSPITAL IN THE ASHBURN AREA OF LOUDOUN COUNTY

The Loudoun County Department of Economic Development estimates that the County's population will exceed 300,000 residents by 2010, which would be more than sufficient to support the existence of a new hospital in the Ashburn area of Loudoun County. Currently, the average ratio of general acute care hospital beds per 1,000 residents in Planning District 8 (Northern Virginia) is 1.34 beds per 1,000. By contrast, Loudoun County has a ratio of 0.56 beds per 1,000, well below the average number of beds available for residents elsewhere in the Planning District and for Virginians elsewhere in the Commonwealth. Loudoun County cannot only support a new hospital in Ashburn – Loudoun County needs another hospital in Ashburn.

Moreover, through a series of revisions to the County's General Plan, the Board of Supervisors adopted policies that direct the overwhelming majority of future population growth within Loudoun County to the eastern Suburban Area, specifically in the area surrounding the Property for which the BRMC is proposed. Indeed, the Board of Supervisors has rejected several proposed amendments to the Revised General Plan that sought to increase substantially the number of homes located along Route 50 in the Transition Policy Area. As a result, immediate population growth in the County has been channeled to the Suburban Policy Area generally east of Route 659 and north of Route 50, away from the Transition and Rural Policy Areas, thereby making the Ashburn area and the Dulles Greenway corridor the most logical location, as recognized by the State Health Commissioner, in which to site a new hospital.

C. SITE DESIGN AND ACCESS

The Property on which the hospital is to be built is bounded by Belmont Ridge Road to the west, the Dulles Greenway to the north, Broadlands Boulevard to the south and the Broadlands Stream Valley Park to the east. This location at the intersection of the Greenway and Route 659 provides the easiest access to services for eastern and western Loudoun County residents. The Greenway, a 16-mile, state-of-the-art four- and six-lane divided highway, provides an east-west connection from Leesburg to the Dulles Toll Road and Route 28 in adjacent Fairfax County, parallel to the severely congested Route 7. Route 659, coupled with the completion of the north-south Claiborne Parkway and the Loudoun County Parkway just east of the site, all provide other important transportation connections. In short, BRMC will be at the center of the transportation axis of the most rapidly growing population base within Northern Virginia.

Primary access to the proposed hospital would be provided via Broadlands Boulevard at its intersection with the existing Glebe View Drive; secondary access would be provided from an internal private road constructed within the Broadlands commercial land bay to serve the

Loudoun County School Board Administration building and other uses located east of the Property. The Applicant also requests approval for a right-in/right-out (and median break for ambulances only) along Route 659 near its intersection with Broadlands Boulevard to permit direct access to the BRMC Emergency Department.

The Applicant expects to provide a combination of structured and surface parking, constructed in phases, as part of the hospital campus. The use of structured parking on site, which is rare in Loudoun County at this point in time, permits the Applicant to make more efficient use of the Property, create substantial open space areas and provide adequate parking for hospital employees, patients and visitors. The initial parking structure in the front portion of the hospital will be constructed concurrent with the hospital and first medical office/outpatient facility. The second parking structure will be constructed concurrent with the second medical office/outpatient facility, located on the southeast portion of the Property. The Applicant will comply with the parking requirements of the Revised 1993 Zoning Ordinance upon the completion of each phase of development.

Substantial landscape berms and buffers will be provided along Broadlands Boulevard and Route 659/Belmont Ridge Road to help screen the hospital campus from adjacent residential uses. The Applicant has designed BRMC to comply with the setback, landscaping, buffering and transportation requirements of the Broadlands Proffers, the Fallen Willow Farm Proffers and the Revised 1993 Zoning Ordinance, subject to the requested ZMODs.

The BRMC will be provided with public utilities (potable and fire protection water, sanitary sewer, natural gas, telephone, cable, fiber optic, solid waste services, electrical). Utilities are either existing and/or will be extended to the site. The existence of public water and sewer to serve hospitals is a requirement of the Zoning Ordinance and the State Medical Facilities Plan. The Applicant also expects to construct emergency fuel storage tank(s) and back-up generators on site in order to maintain critical hospital services during periods of electrical failure, inclement weather and similar emergencies.

Architectural designs and building materials are compatible with the surrounding neighborhood. A rendering of the proposed hospital and medical office building is included in the SPEX plat submitted with this application. The Applicant expects to construct a monument sign at the entrance from Broadlands Boulevard and the entrance from the private road, along with directional signage and building-mounted signs consistent with applicable Zoning Ordinance provisions.

D. TRANSPORTATION IMPROVEMENTS AND NETWORK CAPACITY

The Broadlands and Fallen Willow Farm Proffers include a long list of transportation-related improvements that are to be constructed or partially funded as part of the development of the Broadlands community. Assuming these improvements are constructed as set forth in the Proffers, the surrounding road network is planned to and will be more than sufficient to handle the traffic resulting from the development of the BRMC.

In fact, the proposed hospital will generate fewer AM Peak, PM Peak and total daily trips than would the underlying approved office uses permitted by the PD-OP zoning designation. An

analysis of the transportation impacts of the proposed BRMC is provided under separate cover.

V. CONCLUSION

The SPEX application is consistent with the guidance and standards set forth in the Revised General Plan and the standards of the Revised 1993 Loudoun County Zoning Ordinance and applicable Proffers. Accordingly, the Applicant respectfully requests the support of the County Staff and Planning Commission and approval of the SPEX and ZMODs by the Board of Supervisors.

353390 v5/RE

Mark C. Looney
(703) 456-8652
mlooney@coolley.com

September 3, 2008

Van Armstrong, Program Manager
Loudoun County Planning Department
1 Harrison Street, SE, 3rd Floor
P.O. Box 7000
Leesburg, VA 20177-7000

RE: Responses to Referral Comments - Broadlands Regional Medical Center, SPEX 2008-0028, ZCPA 2008-0001, and ZCPA 2008-0002

Dear Van:

On behalf of Women's Hospital Indianapolis, L.P., and Northern Virginia Community Hospital, LLC, (collectively, the "Applicant"), the Applicant in the above-referenced applications, I write to provide responses to the County's second set of Staff and agency review comments on the proposed Broadlands Regional Medical Center. Summaries of Staff comments on outstanding issues are noted in *italics*, where applicable, and followed by the Applicant's responses. The revised plans, proffers, conditions of approval and requested zoning modifications are included with this submittal.

OFFICE OF TRANSPORTATION SERVICES

4. *Status of traffic signal at Truro Parish Drive and Route 659.*

The Applicant has added language to its proffers to include the construction of a traffic signal, if warranted and approved by VDOT, at the subject intersection. This should resolve the Staff's issues on this topic.

6. *Trail along Broadlands Boulevard should be ten feet (10') per County standards.*

The trail along Broadlands Boulevard has been substantially constructed and is generally eight feet (8') in width per County standards when constructed. The Applicant contends the existing trail is sufficient for its intended purposes.

8. *Include an escalator clause in the traffic calming contribution amount.*

The Applicant has proposed modifications to the draft Conditions of Approval to include an escalator clause, as requested.

ENVIRONMENTAL REVIEW TEAM

1. *No written comments provided.*

Van Armstrong, Program Manager
September 3, 2008
Page Two

In response to verbal comments received in a meeting with ERT Staff on August 28, 2008, the Applicant has proposed revisions to the Conditions of Approval to address the following:

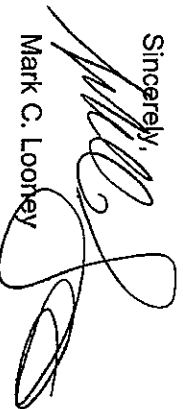
- a. Retain, if possible, the two specimen trees (trees 3 & 4) located in the general area in which the Applicant intends to install one of two enhanced extended-detention basins to improve storm water quality leaving the Property and reduce the rate of discharge of storm runoff into adjacent channels;
- b. Require the use of low-flow toilets, sinks and showers in certain areas of the hospital to increase water efficiency; and
- c. Require the engagement of an energy management consultant or similar professional to assist in the design of the hospital and identify potential energy-efficiency measures that can be incorporated into the hospital's design.

ZONING

The Applicant has revised its plans, proffers and conditions to address the Zoning Staff's comments, including the addition of a Zoning Modification ("ZMOD") request for ZCPA 2008-0001 concerning building heights at the edges of a PD-H boundary. The Applicant also deleted a proposed ZMOD for ZCPA 2008-0002 concerning access to public streets.

I trust that these responses adequately address the Staff's comments. Please let me know if you have questions or need additional information. Thanks.

Sincerely,



Mark C. Looney

376323 vl/RE

MEMORANDUM



TO: Van Armstrong
FROM: Molly M. Novotny
DATE: August 8, 2008
RE: Applications SPEX 2008-0028, ZCPA 2008-0001 and ZCPA 2008-0002

Van:

On behalf of Women's Hospital Indianapolis, L.P., and Northern Virginia Community Hospital, LLC, (collectively, the "Applicant"), the Applicant in SPEX 2008-0028, ZCPA 2008-0001 and ZCPA 2008-0002, we are pleased to provide the following documents that have been revised to address staff comments:

1. The Response to Referral Comments letter for the SPEX 2008-0028, ZCPA 2008-0001 and ZCPA 2008-0002;
2. A revised Proffer Statement for the Fallen Willow Farm property, with the Zoning Ordinance Modification Requests attached and a redlined version to show the changes;
3. A revised Proffer Statement for the Broadlands 100/102 property, with the Zoning Ordinance Modification Requests attached and a redlined version to show the changes;
4. The revised Development Conditions for the SPEX 2008-0028 and a redlined version to show the changes;
5. Eight plan sets of each application;
6. Four copies of the revised Traffic Impact Analysis.

Should you have any questions, please don't hesitate to call or e-mail me. I can be reached at 703-456-8105 or mnovotny@cooley.com.

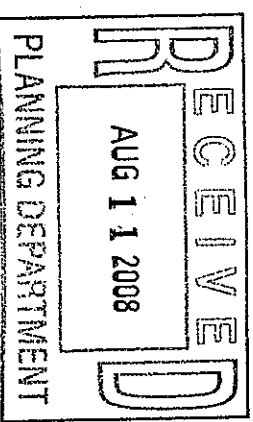
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CONFIDENTIALITY NOTE: This memorandum and the information it contains are intended to be a confidential communication only to the person or entity to whom it is addressed. If you have received this information in error, please notify us by telephone and return this original to this office by mail.

Coolley

GODWARD KRONISH
LLP

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August 8, 2008

Van Armstrong, Program Manager
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Leesburg, VA 20177-7000

RE: Responses to Referral Comments - Broadlands Regional Medical Center, SPEX 2008-0028, ZCPA 2008-0001, and ZCPA 2008-0002

Dear Van:

On behalf of Women's Hospital Indianapolis, L.P., and Northern Virginia Community Hospital, LLC, (collectively, the "Applicant"), the Applicant in the above referenced applications, I write to provide responses to the County's initial Staff and agency review comments on the proposed Broadlands Regional Medical Center. Staff comments are noted in italics and followed by the Applicant's responses. The revised plans, proffers, conditions of approval and requested zoning modifications are included with this submittal.

DEPARTMENT OF TRANSPORTATION (VDOT)

Please see Attachment A to this letter, which was prepared by Gorove/Slade Associates, Inc., for responses to VDOT's comments.

DIVISION OF ENVIRONMENTAL HEALTH

- 1. The Health Department recommends approval of this application. However, no further approvals will be forthcoming until the existing sanitary facilities are abandoned as was noted in an earlier referral (July 7, 2005) for road easements.*

Comment noted.

ENVIRONMENTAL REVIEW TEAM ARCHAEOLOGIST

- 1. Staff concurs with the finding of the Phase I and Phase II archaeological reports for the subject property prepared by Engineering Science in 1994 and the Phase I report prepared by Thunderbird Archeological Associates in 2002 and agrees that no further archaeological work is warranted for the subject property.*

Comment noted and appreciated.

ENVIRONMENTAL REVIEW TEAM

1. Provide a note(s) on Sheet 1 describing the jurisdictional determination and wetland permit status for the subject property. The note(s) should be an updated version of notes K and J on the Environmental and Cultural Resource Existing Conditions Plat, dated October 2002, provided with the initial special exception application submittal materials.

The Applicant's plans have been revised to address this comment.

2. Staff encourages preservation of jurisdictional waters and wetlands on site due to the water quality and ecological benefits they provide. The proposed layout will result in impacts to the majority of the jurisdictional waters and wetlands present on site. Staff recommends that the layout be revised to avoid and minimize impacts, consistent with River and Stream Corridor Resource Policies 1 and 11 in Chapter 5 of the Revised General Plan (RGP) (Pages 5-6 and 5-9).

Wetlands impacts have been permitted by the U.S. Army Corps of Engineers ("Corps") and Virginia Department of Environmental Quality ("DEQ"). These permits have been modified numerous times. The latest Corps permit is dated April 8, 2003 (97-B0546) and the latest DEQ individual Virginia water protection permit is dated May 23, 2003 (94-1178).

The prior owner of the subject Property secured these permits in anticipation of the Property's development irrespective of the proposed use and design, and the permits substantially predate the filing of this application. Moreover, mitigation of the wetlands impacts already has been completed or purchased offsite in accordance with the permits. Thus, the Applicant's design of the proposed development is consistent with the wetlands permits and the completed mitigation.

3. Staff emphasizes the importance of mitigating wetland and stream impacts close to the impact area to help maintain water quality and flood protection functions, as well as habitat. As such, for any necessary mitigation, staff recommends a condition of approval prioritizing mitigation as follows: 1) onsite, 2) within the Broad Run Watershed within the same Planning Policy Area, 3) within the Broad Run Watershed outside the Planning Policy Area, and 4) Loudoun County, subject to approval by the U.S. Army Corps of Engineers ("Corps") and the Virginia Department of Environmental Quality ("DEQ"). This approach is consistent with Policy 23 on Page 5-11 of the RGP which states that "the County will support the federal goal of no net loss to wetlands in the County." Furthermore, the County's strategy is to protect its existing green infrastructure elements and to recapture elements where possible [RGP, Page 6-8, Green Infrastructure Text].

Please see the preceding answer.

4. To facilitate staff's review, please depict the extent of forest cover types and specimen tree locations on a plan sheet with the proposed development layout.

The Applicant submitted with its applications an existing conditions plan that shows the locations and types of existing vegetation and specimen trees on the Property. Given

the size of the subject Property, the expanse of existing vegetation and the complexity of the Applicant's design, overlaying the existing conditions plan on the proposed plan of development is likely to produce an illegible graphic that offers little new or different information.

The Applicant has, however, identified on the plat for SPEX 2008-0028 the approximate locations of specimen trees on the Property. As the plans indicate, most specimen trees will be removed as part of the Applicant's development. The Applicant has identified two trees located at the eastern edge of the Property that it may be able to retain as part of the proposed development, but, as set forth in the response to comment #7 below, such trees are located in the same area in which the Applicant plans to install enhanced stormwater management features to improve storm runoff and water quality. Whether these trees can be retained and not conflict with the enhanced stormwater management facilities will be determined as part of site plan approval.

5. *The best tree cover, which consists of mixed hardwoods, is located in the central portion of the property and will be eliminated as part of the development proposal. The application includes two (2) tree save areas along Broadlands Boulevard that consist of less desirable species such as Virginia pine. During the site visit it was noted that numerous Virginia pine trees had already fallen or were leaning, which is due to the species' susceptibility to windthrow (see attached Photo 1). Staff is concerned that once trees around the proposed tree save areas are removed, trees will be further exposed and windthrow will be accelerated, resulting in unattractive tree save areas. As such, staff recommends that the applicant commit to the following:*

- *Within the proposed tree save areas, remove trees with high susceptibility to windthrow, based on recommendations from a certified arborist.*
- *To provide a screening component, supplement the remaining trees (wind firm trees) within the tree save areas with 6-foot evergreen trees at a minimum density of 250 trees per acre (approximately a 13-foot by 13-foot spacing).*
- *Reforest the area between the internal loop road and the western tree save area using 3-gallon containerized native deciduous plant material, at a minimum density of 220 trees per acre (approximately a 14-foot by 14-foot spacing). It is staff's understanding that tree preservation was not considered in this area due to the grading required for construction of the loop road. Once grading is completed, staff believes that the area provides an excellent opportunity to recapture deciduous vegetation that will be eliminated with this application.*
- *Provide a tree conservation/reforestation plan to the County for review and approval prior to first site plan approval.*

The Applicant has situated the hospital and related facilities on the Property so as to provide substantial distance and buffers between the buildings and the residences located across Broadlands Boulevard. The designated Tree Conservation Areas, as shown on the special exception plat, are intended to help screen the buildings from view, while preserving as much natural vegetation as possible given the substantial grading needed to address the Property's undulating topography.

In response to the Staff's comments, the Applicant has revised the proposed conditions of approval to require the Applicant to employ a professional forester or certified arborist to (a) assist in the establishment of the Tree Conservation Areas, including recommendations for the removal of trees susceptible to windthrow or that are dead, dying or diseased, (b) develop plans for supplemental landscaping within the Tree Conservation Areas, and (c) develop plans for new landscaping to reforest the southwest corner of the Property between the internal loop road and the southwest Tree Conservation Area. The Applicant will submit the arborist's recommendations to the County for review and approval as part of its landscape plans for the proposed medical campus.

6. Staff recommends adjusting the layout to accommodate specimen tree preservation. For example, preservation of specimen trees 6, 7, and 8, which are mature white oak trees with diameter at breast height (DBH) ranging from 27 to 34 inches, becomes possible if the proposed parking is shifted farther northeast. The parking alignment should also account for the preservation of specimen trees 3 and 4, which are Southern Red Oak with a 27.5-inch DBH and swamp white oak with a 28.3-inch DBH, respectively. Some of the specimen trees described above can be seen in attached photos 2 and 3. Preservation of other specimen trees should also be considered. Staff believes that preserving specimen trees will be an asset to the medical campus.

Because of the substantial amount of grading required to create a level site for development of the Property, the Applicant is unable to save trees 6-8, as requested by Staff. As the Staff is aware, the Property slopes approximately 80 feet from Route 659 to the eastern end of the Property. In order to make the Property sufficiently level for development, the Applicant must grade and fill the northeastern end of the Property, thereby negatively impacting trees 6-8, irrespective of the layout of the hospital building.

The Applicant has examined the potential to save trees 3 and 4, as suggested by Staff, but is unable to determine at this time whether it can be accomplished. As described in the response to Comment #7 below, the most beneficial location at which to locate an enhanced extended-detention facility is in the general location of trees 3 and 4, as it is near the point at which storm runoff from the Property first is conveyed offsite into the system leading to the regional ponds.

7. Staff requests information regarding how the proposed development will meet stormwater management (SWM) quantity requirements in Chapter 5 of the Facilities Standards Manual (FSM). During the site visit the following were noted: 1) several stretches of stream channel downstream of the subject site have not been channelized to handle higher stormwater runoff peak flows; and 2) the existing wet pond located east of the Loudoun County Public Schools building does not have sediment forebays. These conditions suggest that the applicant needs to account for stormwater quality and quantity on site to meet current FSM and ordinance requirements.

Management of stormwater runoff from the Property is provided in the existing regional pond located east of the Property. The pond was designed and constructed in accordance with FSM standards to accommodate runoff from the subject Property as well as runoff from other areas of Broadlands, the Loudoun County Public Schools' building, Clyde's and even portions of Route 659, and was approved for such purpose by Loudoun County.

Runoff from the subject Property principally will be routed via underground pipes located beneath the roads, parking areas and plazas located on the school administration building's parcel and the Clyde's parcel located east of the Property. Small segments of the conveyance system are located within above-grade channels located on the Clyde's parcel and situated (a) between two parking lots and (b) near the entrance to the SWM ponds. Both sets of channels are considered jurisdictional wetlands that cannot be disturbed absent new wetlands permits, which are unlikely. They also are located on Property not owned by the Applicant. As a result of these limitations, the Applicant contends that further upgrades to offsite channelized facilities are not practicable or advisable.

In response to the Staff's concerns, however, the Applicant has revised its plans to include additional stormwater controls on the subject Property to provide a form of pre-treatment (e.g., slow the rate of post-development discharge) before the runoff is released into the offsite conveyance systems and, eventually, into the regional pond. Specifically, the Applicant intends to install one or more enhanced extended-detention basins or similar facilities in the eastern portion of the Property. The facilities will control stormwater runoff from at least the one-year, 24-hour storm, as well as function as the Low Impact Development (LID) feature for the proposed development, including achieving a phosphorous removal efficiency of at least 50%, thereby also improving water quality.

The proposed enhanced extended-detention facilities will replace LID features previously proposed for the Applicant's development, which did not achieve the same phosphorous removal as this new facility will.

8. *Proposed Special Exception Condition 2 requires low impact development (LID) features to be incorporated into the project at locations specified on the special exception plat. Staff recommends that the condition be adjusted to specify that the selected LID measures must achieve at least a 50 percent phosphorus removal efficiency as described in Table 2-3 in the Virginia Stormwater Management Handbook and may not be a manufactured best management practice (BMP).*

Please see the response to Comment #7 above.

9. *The last sentence in note 25 on Sheet 1 states that the applicant is not required to substitute or replace LID measures that are removed as part of construction of the Phase 2*

Van Armstrong, Program Manager
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Page Six

parking structure. To ensure water quality protection, staff recommends that this sentence be removed or modified to state that equivalent water quality treatment will be provided.

In accordance with the response to Comment #7 above, the Applicant has removed this note.

10. Staff acknowledges the provided list of green initiatives that were incorporated into the *Spotsylvania Regional Medical Center project*. Staff encourages a commitment in the design of the proposed structures to meet Leadership in Energy and Environmental Design (LEED) standards, as supported by the United States Green Building Council. With the second submittal, please include a LEED for New Construction score sheet to indicate design commitments to site sustainability, water efficiency, energy and atmosphere, indoor air quality, efficient materials and resources use, and innovative design that will be incorporated into this project.

LEED recognizes site sustainability, conservation of energy and water, and indoor air quality, among other goals. The Revised General Plan also encourages these goals in the General Water Policies supporting long-term water conservation (Policy 1, Page 2-20); the Solid Waste Management Policies supporting waste reduction, reuse, and recycling (Policy 2, Page 2-23); and the Air Quality Policies supporting the creation of pedestrian and bicycle facilities (Policy 1, Page 5-41). Furthermore, the County encourages project designs that ensure long-term environmental and economic sustainability, as discussed in the Suburban Policy Area, Land Use and Pattern Design text (Page 6-2). As of April 15, 2008, the Board of Supervisors also endorsed LEED as the preferred green building rating system for commercial construction and recommended the "COG Regional Green Standard" for private development, as described on pages 11-12 of "Greening the Washington Metropolitan Region's Built Environment", available at <http://www.mwcog.org/environment/greenbuilding/>.

Staff has suggested that the LEED for New Construction program is the most relevant LEED program for the Applicant's proposed development. Staff may not be aware, however, that the US Green Building Council (USGBC) is working toward a new LEED certification specific to Health Care Facilities, including hospitals. This program is in the review and comment period and has not been formalized or released to the public in official form.

Notably, many of the LEED checklist items, whether for New Construction or Health Care Facilities, are specific to the hospital's interior space. Because the interior plans for BRMC are not sufficiently developed to determine whether the standards are applicable or achievable, the Applicant is unable to submit a detailed LEED checklist at this stage in the review process. The Applicant continues to review the USGBC's draft program and also is analyzing the Green Guide for Health Care and the US Department of Energy's EnergySmart Hospitals program to identify additional green initiatives it may incorporate into the proposed development.

Additionally, it is important to note that, independent of the Applicant's desire to incorporate green-building initiatives into the development of the Property, the Certificate of Public Need (COPN) for the proposed hospital includes a cap on hospital construction costs that may impede the Applicant's ability to incorporate certain environmental features or designs into its development. Unlike unregulated industries that principally face only market restrictions on development costs, and which therefore may pursue LEED certification more easily, hospitals are highly-regulated under Virginia's COPN laws and regulations. Particular attention is paid to containing construction costs for new facilities as a means of keeping health care costs to consumers as low as possible. Accordingly, the COPN approved for BRMC mandates that its construction costs not exceed a set amount, which in turn may have the unintended effect of precluding the Applicant from achieving certain otherwise meritorious design objectives.

Further, there also are various health code-related requirements placed on hospitals that may conflict with green-building standards. Among the potential areas of conflict are air filtration system requirements, interior lighting requirements, etc. Reconciling these potentially competing public policy goals is, in part, the reason that alternative green-building programs focused principally on health care facilities are under development. The Applicant will keep the Staff advised of its evaluation of the application of these programs to the proposed development.

OFFICE OF TRANSPORTATION SERVICES

1. Please document the status of the construction of Broadlands Boulevard to its intersection with Belmont Ridge Road.

This road segment is constructed up to the proposed intersection with Route 659 and, pursuant to an agreement between the County and Broadlands Associates, LP, is expected to be completed in late 2008 or early 2009 concurrent with the completion of the widening of Route 659.

2. Please document the status of widening Belmont Ridge Road to four lanes between Broadlands Boulevard and the Greenway.

Pursuant to an agreement between the County and Broadlands Associates, LP, this road section is under construction and is expected to be completed in late 2008 or early 2009.

3. Improvements to Route 659 are important to adequate transportation access to the proposed medical campus. OTS's reading of Proffer V.D.49 of ZCPA 2008-0001 is that the applicant will provide a four-lane median divided expansion to Route 659 between Broadlands Boulevard and Northstar Boulevard in Brambleton. Further, these improvements will be constructed prior to the issuance of the first occupancy permit or its equivalent for the first building constructed on the property. Please confirm the accuracy of this proffer summary. This will be a substantial improvement over the current efforts to the

"Route 659 Road Club" to widen the road, since that effort would only extend between Broadlands Boulevard and Truro Parish Drive.

Staff's analysis of the Applicant's proffers is correct, although the Applicant also notes that it proffered these improvements with the expectation that funds from the Route 659 Transportation Improvement Fund (TIF), including all existing funds and all future contributions to the fund, will be made available to the Applicant to assist in the construction of the section of Route 659 between Broadlands Boulevard and Truro Parish Drive. The Applicant's principal focus is on the section south of Truro Parish where currently no proffered funds are available or expected.

4. The TIA for this application demonstrates that traffic signals will need to be installed at the Route 659/Broadlands Boulevard and Route 659/Truro Parish Drive intersections by 2011 to serve this proposed development at adequate service levels. There are no existing proffers specifically for these signals. The participation of the Medical Campus in the provisions of these signals needs to be defined.

Pursuant to an agreement between the County and Broadlands Associates, LP, a traffic signal is to be installed at the intersection of Broadlands Boulevard and Route 659 concurrent with the widening of Route 659 at that intersection. It is the Applicant's understanding that design plans for the signal have been submitted to Loudoun County for review and approval.

The TIA indicates that the need for a traffic signal at the intersection of Route 659 and Truro Parish Drive is not generated by the Applicant's proposed development; the need for a traffic signal results from background conditions and the heavy north-south traffic using this important arterial. Because the Route 659 TIF was formed to address the cumulative effects of development along Route 659 between Broadlands Boulevard and Truro Parish Drive, the Applicant anticipates that TIF funds would be used to fund installation of any needed traffic signal at that intersection.

5. The transportation conditions of SPEX 2008-0028 include the following and all are appreciated: a multi-purpose trail along Broadlands Boulevard, a bus shelter, applicant coordination with the County for transit marketing, an emergency entrance to the hospital.

Comment acknowledged.

6. Please identify connections between the Broadlands Boulevard trail and the sidewalk/trail network in the Broadlands Community.

The Applicant's plans have been revised to highlight the 8-foot wide trail along Broadlands Boulevard and the 5-foot wide sidewalk along Education Court.

7. Documentation on why the number of beds is a better variable for determining trip generation from a hospital, rather than square footage, would be appreciated.

The number of beds is a more appropriate variable to use compared to the square footage of the hospital, as it is both more precise and can more accurately reflect the number of employees, patients and visitors. Many new hospitals have private rooms rather than the shared rooms in older hospitals, thereby making the square footage higher without changing the bed count, number of employees needed, and number of visitors to the hospital. The square footage of hospitals may vary as well based on how much mechanical/core, laboratory, and testing area there is. In addition, the "number of beds" variable in the Institute of Transportation Engineers (ITE) Trip Generation, 7th Edition, has a larger sample size for each time period, making the rate for calculating and estimating vehicle trips more statistically reliable than the square footage variable.

If the square footage of the hospital is to be used, it should be net square footage. On average, the net square footage of a hospital is approximately 60-65% of the gross floor area. Using the net square footage in the trip generation calculations produces results that are closer to those when using the 'number of beds' variable, reducing the discrepancy in the results of the two variables.

For the reasons above, the Applicant maintains that using the number of beds variable for the hospital land use in the Trip Generation manual is a more reliable way to estimate the trips that will be generated by a new hospital.

8. The applicant should work together with the Broadlands Community and the County to identify and implement traffic calming techniques which would discourage cut-thru traffic to the hospital using local streets.

The Applicant has agreed to contribute \$200,000 to the County for traffic calming measures. The money, which will be paid prior to the approval of the initial site plan for the hospital, can be used by the County to install features designed to discourage cut-through traffic. To better identify what local Broadlands' roads are being used as cut-through streets by vehicles accessing the Property, the Applicant has agreed to conduct a traffic analysis, should the County request one in writing within three years of issuance of the first occupancy permit. The Applicant's \$200,000 contribution could be used by the County to prepare construction plans and install local street traffic calming features to minimize the cut-through traffic identified by the analysis.

LOUDOUN WATER

1. Loudoun Water has reviewed the referenced application and offers no objection to its approval.

Comment acknowledged and appreciated.

DEPARTMENT OF PLANNING

1. The proposed Regional Medical Center in Broadlands is in conformance with the service and location criteria of the Countywide Health Care Facilities Plan Policies given the

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regional nature of medical centers as specified in the County's adopted land use policies for health care facilities. The location is central to the population of the regional service area and provides additional medical care service choices. The proposed location also provides rapid access to western Loudoun. While County policy states that consideration should be given for locating a full-service hospital near the Route 50 corridor, State and County approvals are not in place to consider such an option at this time. Until improved access into the Dulles South community is available, the regional function of a full-service hospital may not be realized. Such improvements are underway and could increase the potential for a hospital in the Route 50 corridor in the future. Approval of this facility would not preclude consideration of other proposals for medical facilities in the Route 50 corridor, Leesburg or other underserved areas.

The Applicant appreciates and agrees with the Planning Staff's assessment that the applications conform with the Revised General Plan's ("RGP") policies, including the Health Care component. As the Staff notes, the planned BRMC is a regional facility that was approved by the State Health Commissioner based on the health care needs of Planning District 8, not just Loudoun County. The proposed location of BRMC improves access to health care for thousands of Loudoun County residents, including residents along Route 50, while also improving accessibility for patients who reside outside the County.

Moreover, approval of the Applicant's plans for BRMC does not preclude other health care providers from seeking COPN approval for additional health care facilities, including hospitals, elsewhere in Loudoun County. Indeed, an affiliate of the Applicant has submitted a COPN application to the State Health Commissioner to establish facilities and services within a planned freestanding emergency department to be constructed on property located on Route 50 near its intersection with existing Gum Spring Road. Further, we understand that another national health care provider has announced plans to construct a rehabilitation hospital along the Route 50 corridor. Together, these proposals demonstrate that approval of BRMC does not in any way preclude the submission of COPN applications to expand health care services in the Dulles South area consistent with the RGP's Health Care policies. To the contrary, the Applicant's proposal for BRMC has led to fierce competition among providers to expand services available to Loudoun County residents, a key goal of the Health Care CPAM, particularly in areas that are or may be under-served.

With regard to competition among providers, the Applicant also notes that the Virginia General Assembly recently enacted and the Governor signed into law legislation requiring the State Health Commissioner to consider, among the 21 statutory criteria against which COPN applications must be evaluated, "the extent to which a [proposed health care facility will] introduce institutional competition into a health planning region." See Va. Code § 32.1-102.3(B)(21). The General Assembly has recognized, as Loudoun County did when it inserted the concept of "choice for health care consumers" into the RGP's Health Care policy goals, that the concentration of services in a single, large, regional health care system can be detrimental to health care consumers. As a result,

going forward, COPN applications must demonstrate that their approval furthers the goal of competition and, by extension, choice for consumers.

Finally, the Applicant reminds Staff that the Board of Supervisors previously considered the Staff's conclusions in 2005 that the proposal to establish BRMC conforms with the Health Care policies of the RGP and did not contest the Staff's conclusions. Although members of the prior Board of Supervisors did vote to deny earlier zoning applications for BRMC, the purported reasons for that denial did not include inconsistency with the RGP's Health Care policies. Thus, the Staff's analysis of the Health Care policies already has been affirmed by the Board once. The principal issue before the Board of Supervisors today, therefore, is whether the Staff's continued support for the full BRMC proposal also should be affirmed. We strongly submit that it should.

2. Staff recommends that if additional areas of vegetation outside of the designated tree save areas can be retained through the grading process, that the applicant make their best effort to preserve them.

Please see the Applicant's response to ERT comment #5 above.

3. Staff requests that bio-retention areas and vegetated filter strips be included with this project because of the extensive amount of impervious surface even with structured parking facilities. Specifically, filter strips could be placed at the edges of or between parking lots consistent with design principles.

Please see the Applicant's response to ERT comment #7 above.

ZONING

Except as discussed herein, the Applicant has revised its plans, proffers and conditions to address the majority of the Zoning Staff's comments, including the addition of (a) a Zoning Modification request for ZCPA 2008-0001 concerning access to a commercial development via private streets (Section 4-110(B)), and (b) separate Zoning Modifications for both ZCPA 2008-0001 and ZCPA 2008-0002 of Sections 4-109(D) and 4-110(J) concerning the buffer yards to be provided in commercial areas adjacent land bays zoned for residential uses. The first modification recognizes that existing Education Court, which is a secondary entrance to the proposed hospital, was constructed as a private street prior to the recent Zoning Ordinance changes requiring all streets serving a commercial development to be public.

The second set of modifications clarify that the Applicant will install the previously-proffered buffer along the Property's frontage on Route 659 in lieu of the Ordinance's required Type 3 buffer, as the proffered buffer offers a greater level of screening than does the revised Type 3 buffer set forth in the Ordinance.

The Applicant also has added a new proffer to ZCPA 2008-0001 to address the need for a buffer between the Broadlands portion of the Property and the Fallen Willow Farm portion. Although the Applicant does not believe such a buffer is or would be required due to the Fallen

Van Armstrong, Program Manager
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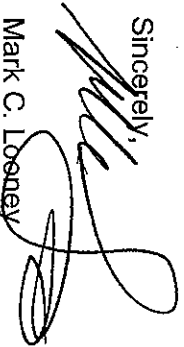
Willow Farm's subsequent rezoning from residential uses (for which a buffer would be required) to PD-OP (for which no buffer is required), the Applicant nevertheless agrees with Staff that clarification of this issue would be helpful.

In addition, the Applicant notes that several Staff comments suggest that the Applicant must include as part of its Lot Coverage calculations the area of above- and below-grade structured parking facilities. The Applicant suggests that the Staff's analysis is not correct. Instead, as we subsequently have discussed, the Ordinance's definition of Lot Coverage specifically excludes nonresidential parking structures from lot coverage calculations. Thus, no change to the Applicant's plans are required.

The Applicant also notes that, in response to comment V.14 to SPEX 2008-0028, Sheet 6 of the Applicant's SPEX plat is provided for illustrative purposes only, and the layout of the surface parking on the illustrative plan does not govern the Applicant's development. Instead, Sheet 3 of the SPEX plat is the governing plan.

I trust that these responses adequately address the Staff's comments. Please let me know if you have questions or need additional information. Thanks.

Sincerely,



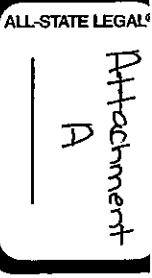
Mark C. Looney

372049 v4/RE



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MEMORANDUM

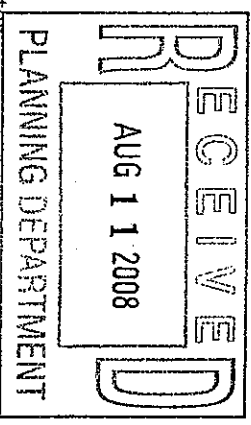
TO: Tom Van Poole
Art Smith
Virginia Department of Transportation
Loudoun County OTS

CC: John Massey
Mark Looney
Ryan David
CESP, Inc
Cooley Godward Kronish LLP
Urban Ltd.

FROM: Cheryl Sharp, P.E.
Christopher M. Tacinelli, P.E.

DATE: August 6, 2008

SUBJECT: Response to Comments for Broadlands Regional Medical Center
Loudoun County Application Numbers SPEX 2008-0028, ZCPA 2008-0001,
and ZCPA 2008-0002



The purpose of this memorandum is to address comments received from the Virginia Department of Transportation dated July 11, 2008 regarding the transportation aspects of the Broadlands Regional Medical Center application. Responses to the issues highlighted by the VDOT staff are addressed in the following sections.

VDOT COMMENTS:

1) *It takes an unreasonably long time to navigate through Synchro files because of the time the model takes to redraw and load the file. I believe the problem is inclusion of several un-connected links to the main network, for the purpose of showing future connections. Since these links serve for presentation only and do not play a role in the analysis, I would recommend taking the un-connected links out of the model and resubmit. I would agree that the results would not change, however it is important that Synchro files are easy to navigate for review purposes.*

Comment noted. The unconnected links were removed from the model.

2) *Figure 3 Existing Traffic Volumes - The left and right turn volumes on WB Intersection 3 and EB Intersection 5 and 6 are switched. Synchro files however show the correct volumes. It suffices to only correct volumes shown on the figure.*

Comment noted. We confirm that it is a typographical error on the graphic and not in the analysis, and the analysis results were not affected by this error. This was updated in the revised report.

- 3) *Input the correct turn bay lengths onto the Synchro model. The model currently shows turn lanes extending all the way back to the upstream intersection, adding incorrect number of thru lanes to the main artery (e.g., Broadlands is shown as four thru lanes in one direction.) This would effectively show the network operating better than actual and may produce erroneous results.*

The analysis results are based on the Highway Capacity Manual (HCM) 2000 methodology, a methodology that is standard and acceptable to VDOT and local jurisdictions within the Northern Virginia region. Per page 16-1 of the HCM, the manual notes that limitations exist for the methodology, including challenges with measuring the impacts of turn lanes in relation to through traffic and intersection operation. Nevertheless, the study intersections shown in the model were revised to reflect the appropriate lane configurations, as requested. The revised analysis indicates that the capacity and level of service performance measures were not affected by turn bay length discrepancies and did not have an effect on the results presented in the original analysis.

- 4) *Is it possible to include a table showing "other developments" that are preferred for the improvements mentioned on Page 14 and in the conclusion?*

The improvements identified in the future without development scenario are those that are needed in order to achieve a LOS 'D' or better based on County standards. Many of the identified improvements will be funded by the "Route 659 Road Club". The "Road Club" consists of several developments in the area, including but not limited to developments such as Broadlands/Broadlands South, Corro Development, Belmont Glen/Rouse, and Goose Creek, which contribute funds to the improvement of Route 659.

- 5) *In the analysis of "Future With Development" on page 22, the study claims that the failing northbound approach at the intersection of Broadlands Blvd and Belmont Ridge Road can be fixed with minor signal timing adjustments. However, this intersection does not currently exist and the signal timing data couldn't have come from VDOT. One would assume that the engineer used optimized signal timings during the analysis of "Future Without Development" which yielded a LOS D/52.8 for the northbound approach (see page 14.)*

The analysis was updated to reflect identical signal timings in both the future with and without development scenarios. The results are presented below as well as in the revised study.

Broadlands Boulevard and Belmont Ridge Road		AM Peak Hour		PM Peak Hour	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)
Future Without Development					
Overall Intersection (Signalized)		C	30.2	B	19.1
Eastbound Approach		D	50.7	D	49.1
Westbound Approach		A	4.9	A	6.8
Northbound Approach		D	53.7	C	25.9
Southbound Approach		B	16.2	B	18.4
Future With Development (using variable 'Beds')					
Overall Intersection (Signalized)		C	27.9	C	20.6
Eastbound Approach		D	50.7	D	49.2
Westbound Approach		A	5.4	A	7.2
Northbound Approach		D	53.3	C	31.0
Southbound Approach		B	12.3	B	18.2
Future With Development (using variable 'Square Footage')					
Overall Intersection (Signalized)		D	39.3	C	24.4
Eastbound Approach		D	50.7	D	49.3
Westbound Approach		A	7.2	A	8.2
Northbound Approach		D	47.0	D	41.5
Southbound Approach		D	40.1	C	20.1

6) So, if signal timings are the same (and should be the same) in both scenarios (Future With Development and Future Without Development) then why the deterioration in the LOS?

Please see response to Comment #5. The results do not show deterioration below a LOS 'D' with the revised signal timings.

7) The "square footage" vs. "number of beds" as the independent variable to be used for the trip generation numbers should have been finalized at the scoping meeting prior to the initiation of the study. Nonetheless, there is a significant difference between the trip generation numbers depending on which variable is used (see table below)

Table 1 - Variable Comparison for Hospital ITE Land Use Code 610

Variable	AM Peak			PM Peak			Daily Total
	In	Out	Total	In	Out	Total	
# of Beds	61	26	87	65	114	179	2,951
Square Footage	338	165	503	170	343	513	6,139
% Increase	454%	535%	478%	162%	201%	187%	108%

Additionally, the sample size used in the ITE Trip Generation, 7th Edition for each variable is comparable, thus making both variables statistically reliable (7 and 14 studies for AM and PM peak hour for # of Beds vs. 5 and

9 studies for Square Footage)

Pending Loudoun County's agreement, VDOT recommends using "square footage" as the independent variable to determine trips generated by the facility.

The number of beds is a more appropriate variable to use compared to the square footage of the hospital, as it is both more precise and can more accurately reflect the number of employees, patients and visitors. Many new hospitals have private rooms rather than the shared rooms in older hospitals, thereby making the square footage higher without changing the bed count, number of employees needed, and number of visitors to the hospital. The square footage of a hospital may vary as well based on how much mechanical/core, laboratory, and testing area there is. In addition, the "number of beds" variable in the Institute of Transportation Engineers (ITE) Trip Generation, 7th Edition, has a larger sample size for each time period, making the rate for calculating and estimating vehicle trips more statistically reliable than the square footage variable.

If the square footage of the hospital is to be used, it should be net square footage. On average, the net square footage of a hospital is approximately 60-65% of the gross floor area. Using the net square footage in the trip generation calculations produces results that are closer to those when using the 'number of beds' variable, reducing the discrepancy in the results of the two variables.

For the reasons above, we maintain that using the number of beds variable for the hospital land use in the Trip Generation manual is a more reliable way to estimate the trips that will be generated by a new hospital during the peak periods.

- 8) *A quick look at the volumes shown on Figure 13 "Future with Development Based on Square Footage" indicates that some left turn lanes warrant an additional lane (intersections 3, 6, 7, and 8). Please perform a left turn lane warrant analysis based on VDOT standards and guidelines.*

The left turn warrant analysis would show whether a single left turn bay is required at an intersection, but each of these intersections already has a left turn bay. VDOT's Road Design Manual points out that a dual left turn movement is desirable where peak left turn volumes exceed 350 vph. However, the capacity analysis shows that these intersections operate with acceptable levels of service without the second left turn, due to lower through volumes and side street volumes.

- 9) *Table 9 shows the LOS for "Future with Development Based on Square Footage" which is not much different than the "Future with Development Based on #of Beds" although the volumes have been significantly increased*

(see table 1 above). In certain cases the LOS has improved although volumes are quadrupled. Please verify the analysis is accurate and all input parameters are inputted correctly.

Comment noted. The analysis was rechecked and found to be accurate. The LOS was shown as improved in the “square foot” scenario as it had different signal timings than the “number of beds” scenario. In the revised analysis, the same signal timings were used in the future without development and future with development (both scenarios), as described in the response to comment #5 above. Please refer to the revised report.

10) Failing intersection LOS is not justification for a traffic signal. Other remedial measures should be considered prior to signalization. In the case of the intersection of Broadlands Blvd. and Site Driveway Intersection 4 under the Future Plus Six Years scenario, the failing approach is the southbound (exiting the site). Please consider additional travel lanes or separate turn lanes as the mitigation measure.

Upon completion of the development proposed with the pending application (i.e., 2011 build-out scenario), the intersection operates at an acceptable Level of Service (LOS) without a signal. The Future Plus Six Years scenario (2017) is used as a planning tool, showing that there may be a need in the future for a signal at this intersection, but not as a result of the development proposed with this application.

Under the Plus Six condition, the unsignalized approach at this intersection results in a LOS F with 116.7 seconds of delay, even with a separate southbound right turn bay (was included in the analysis, but mistakenly not included on the graphic). However, when rechecking the analysis, it was found that by reducing the critical gap parameter in Synchro by a reasonable amount (25%) resulted in acceptable levels of service without needing a signal at this intersection. Thus, the intersection should be reanalyzed in the future once the development and site entrance are established to evaluate whether there is a need for a signal at this intersection.

11) The emergency access point from Belmont Ridge Road (Intersection 2) should be limited to ingress to the site only. Egress can be done via other access points along Broadlands Blvd.

The purpose of this emergency access point is to ensure that emergency vehicles accessing the medical campus are directed away from nearby residential streets to the extent possible. While inbound emergency vehicles are more likely to use sirens and other notification devices than outbound vehicles, it also is quite common for such vehicles to initiate new emergency responses shortly after delivering patients to a hospital. Having the option of leaving the medical campus through the dedicated access point ensures that any noise impacts are minimized.

The Applicant suggests that details concerning operation of the emergency access point, including signage and control measures, can and should be determined as part of site plan approval for the hospital use.

12) Under Executive Summary, Page VI, Section, "Future Conditions With Development (2011), 5th paragraph states that, "At the scoping meeting VDOT requested a comparison analysis for the traffic impact based on the traffic generation forecast for hospital based on the square foot of the hospital as the independent variable." This is incorrect. It was not a request but suggested to look in to trips generated by SIMILAR hospital in the region. There was no request for an analysis based on square footage! Please correct the statement.

Comment noted.

13) Provide a map showing the location of the background developments considered for this study.

A figure is attached to this memorandum showing the locations of the background developments as requested.

14) Provide site's trip distributions by % in addition to turning movements shown in figure 8.

Figure 8 has been updated to include the trip distribution percentages.

APPENDIX

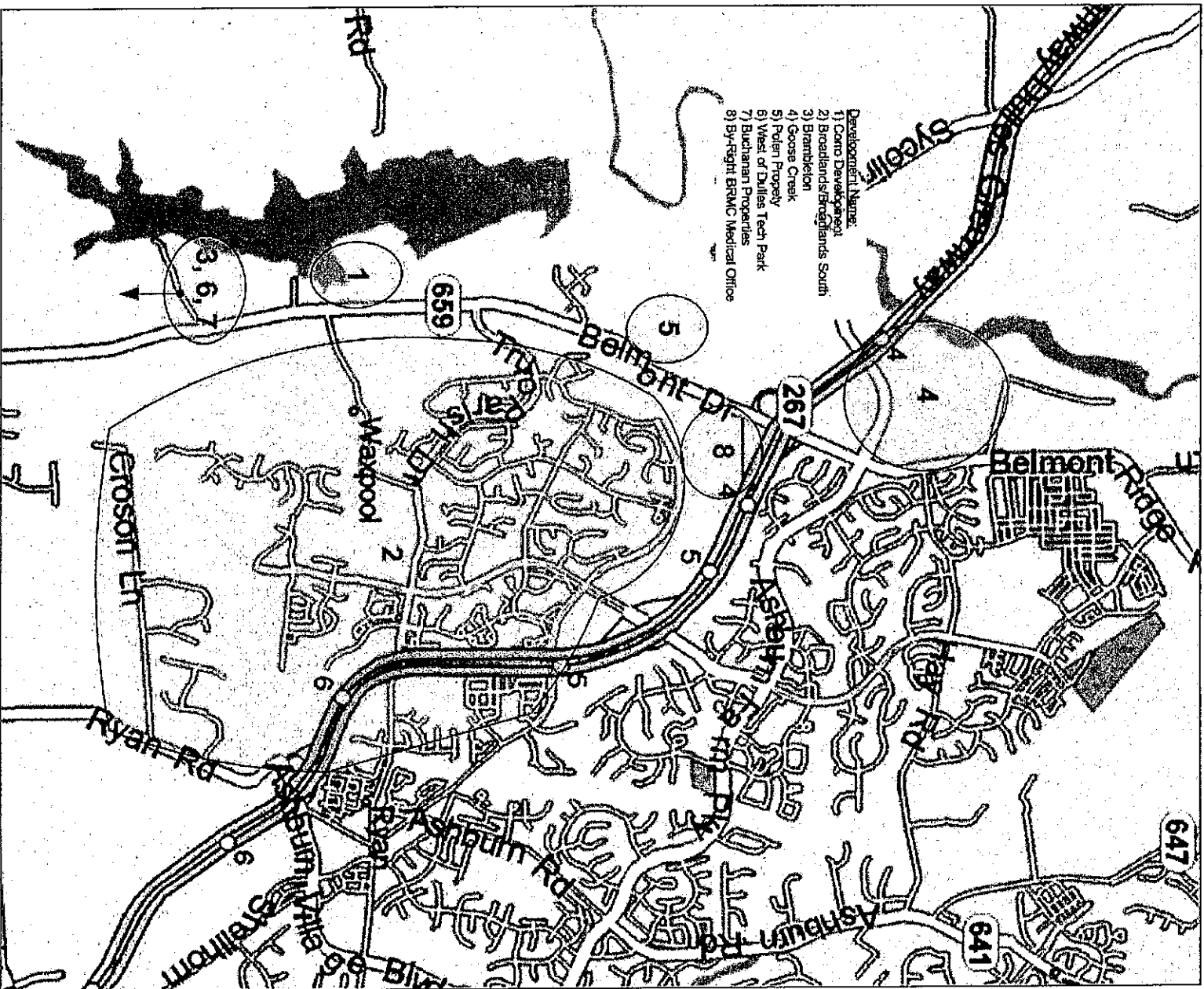


Figure 1: Locations of Background Developments